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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/749,419	12/31/2003	Young-A Kim	YPL-0071	9573
23413	7590	08/22/2006	EXAMINER	
CANTOR COLBURN, LLP 55 GRIFFIN ROAD SOUTH BLOOMFIELD, CT 06002			BABIC, CHRISTOPHER M	
			ART UNIT	PAPER NUMBER
			1637	

DATE MAILED: 08/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action  
Before the Filing of an Appeal Brief**

Application No.

10/749,419

Applicant(s)

KIM ET AL.

Examiner

Christopher M. Babic

Art Unit

1637

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 21 June 2006 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☐ The period for reply expires \_\_\_\_\_ months from the mailing date of the final rejection.  
b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**NOTICE OF APPEAL**

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

**AMENDMENTS**

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because  
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);  
(b) ☐ They raise the issue of new matter (see NOTE below);  
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).  
5. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.  
6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.  
The status of the claim(s) is (or will be) as follows:  
Claim(s) allowed: \_\_\_\_\_.  
Claim(s) objected to: \_\_\_\_\_.  
Claim(s) rejected: 13-15, 19 and 20.  
Claim(s) withdrawn from consideration: \_\_\_\_\_.

**AFFIDAVIT OR OTHER EVIDENCE**

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).  
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).  
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

**REQUEST FOR RECONSIDERATION/OTHER**

11. ☐ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: \_\_\_\_\_.  
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). \_\_\_\_\_.  
13. ☒ Other: See Continuation Sheet.

*Ch M Se* 8/16/06

KENNETH R. HORLICK, PH.D.  
PRIMARY EXAMINER

*Kent R Horlick* 8/17/06

Continuation of 13.

Other: Upon further consideration of the proposed amendments filed 6/21/2006, the previous advisory action dated 7/6/2006 will be vacated in view of the instant advisory action as the proposed amendments do not raise new issues that would require further search and/or consideration.

The proposed amendments filed 6/21/2006 will be entered, however, they would be rejected because the teachings of Cantor et al. apply to the amended language.

As noted previously, due to the inherent nature of polynucleotides, a first polynucleotide will have a second polynucleotide to which it will be complementary. Any sequence contained within the first nucleotide to which a polynucleotide complementary to said first nucleotide might bind may be interpreted as a primer binding site.

As explained to Applicant in an interview on 8/11/2006, currently amended claim 13 recites that the primer binding sites "have" various base sequences, which can be interpreted to mean that primer binding sites "comprise" various base sequences, which allow for the inclusion of any other sequences.

Cantor teaches that a primer binds to a sequence "having" various base sequences (column 21, lines 55-60, for example) because the polynucleotides include a 15 base constant sequence followed by a 5-6 base various sequence. It is noted that Cantor teaches that the primer has a 15 base constant sequence that hybridizes to a complementary 15 base sequence that is constant throughout the sequences immobilized on the solid support, however, the current claim language encompasses such a teaching because the primer binding sites "comprise" various base sequences, which allow for the inclusion of any other sequences.

Thus, Cantor teaches a "primer binding site" having various base sequences, for example, a 15 base constant sequence including a 1-2 base various sequence (column 21, lines 55-60, for example).

With specific regard to Applicant's arguments:

-Claims 3, 4, 9, 10, 13, and 18-21 rejected over Cantor in view of Koster and Dickson

A typographical error was made with regard to the inclusion of claims 18-21 in the bolded rejection statement on page 5 of the Office Action dated April 27, 2006, however, as Applicant highlights, reasoned statements as to the rejections of claims 18-21 were included in the body of the rejection on page 7. Furthermore, the rejection statement of the Conclusion paragraph included the rejection of claims 18-21.

Applicant argues that Cantor does not teach a universal primer that binds to variable primer binding sites, however, as noted above, the claims as currently presented do not require such a limitation.

-Claims 14 and 15 rejected over Cantor in view of Koster and Dickson and Yan

Applicant argues that Yan does not teach a protruding metallic pattern, however, the teachings of Cantor and Koster are relied upon to demonstrate a protruding substrate.

--Claims 16 and 17 rejected over Cantor in view of Koster and Dickson and Nikiforov

Applicant argues that Nikiforov does not teach forming protrusions or recesses or substrates by photolithography. A typographical error was made with regard to the specific teaching a Nikiforov, however, as highlighted by Applicant, Nikiforov does teach patterning a surface by photolithography for the purpose of masking areas of substrates to prevent oligonucleotide binding (column 24, lines 17-21, for example). The teachings of Nikiforov encompass patterning a substrate by photolithography. They further provide an adequate motivation such as to prevent oligonucleotide binding.